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ABSTRACT

Story length and plausibility were varied to see whether these factors significantly affect children's ability to monitor their comprehension. A total of 19 third graders and 25 sixth graders were individually read four stories in a counterbalanced order. Each story had one of the following sets of characteristics: long, low plausibility; short, high plausibility; short, low plausibility; or long, high plausibility. Subjects were asked to serve as consultants in helping to find problems with the stories. Several content representations for each condition were used to avoid content repetition, but across subjects the same themes appeared equally often in long and short stories. Four probe questions of increasing specificity were asked following the presentation of each story. The first two probes were general, preceding and following a request that the child recall the story. The third probe asked for information relating to inconsistency in the story, but did not point it out. The fourth probe explicitly pointed out the inconsistency. Each subject's score was the probe number at which he or she explicitly stated the inference that led to the contradiction in the story. Factors in the analysis of variance were subject's age, story plausibility level, and story length, with repeated measures on the last two variables. Overall, length of story had a small effect, primarily on ease of reporting. Story concreteness and plausibility had a large effect on monitoring ability. (RH)

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# Message Plausibility and Children's Ability to Monitor Their Own Comprehension

Sharon T. Kooney & Martin D. Murphy

Markman (1979) has found that 3rd to 6th grade children usually fail to spontaneously monitor their own comprehension. When read a story with an obvious logical contradiction the children seldom report an inconsistency, even when the contradictory statements are placed contiguously in the story and the children are told to look for a problem.

An essential step in monitoring comprehension of stories with implicit inconsistencies is drawing the inference that makes the contradiction apparent. And, in Markman's study the children clearly failed to spontaneously report such inferences. However, with other stories, Paris and Carter (1973) and Paris and Upton (1976) report data clearly showing that young elementary school children can effectively draw inferences. Markman (1979) also found that if the children were probed directly they could draw the necessary inferences.

Is a failure to monitor comprehension (despite the presence of necessary logical abilities) a general characteristic of immature learners, or did some aspect of Markman's task lead children to demonstrate less comprehension monitoring than they are capable of? Markman's essays involved rather uncommon facts (e.g., ants detecting a chemical odor without noses or baking ice cream to make Baked Alaska) that may have been somewhat implausible to the elementary school children. In contrast Paris and Carter's stories dealt with concrete, plausible events. Also, Markman's

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stories were a good deal longer than Paris's. In this study we varied story length and plausibility to see if these factors importantly affect children's ability to monitor their comprehension.

Children from grades 3 (n = 19) and 6 (n = 25) were each read four stories in a counterbalanced order. The child was asked to serve as a consultant in helping to find problems with the stories. The stories were identical to Markman's in the long, low plausibility condition and similar to Paris and Carter's in the short, high plausible condition. Shortened Markman stories and lengthened Paris and Carter essays completed the within subject factorial design. Several content representations for each condition were used to avoid content repetition for a child, but across children the same themes appeared equally often in long and short stories. Also, an effort was made to equate grammatical complexity across conditions.

Four probe questions of increasing specificity were asked following the presentation of each story. The first two probes were general; they preceded and followed a request that the child recall the story. The third probe asked information related to the inconsistency in the story, but did not point it out. The fourth probe did explicitly point out the inconsistency. The child's score was the probe number at which he or she explicitly stated the inference that leads to the contradiction in the story. In several cases however, children, who did not report the inference, repeated the two statements from the story that were inconsistent and seemed quite confident that they had found the problem. A

lenient scoring scheme counted these responses as correct and the scores with both the lenient scoring and the strict Markman scoring were analyzed in parallel.

The factors in the analysis of variance were age, plausibility level, and length, with repeated measures on the last two variables. While the effects of age were nonsignificant, inconsistencies were pointed out sooner in short (M = 1.99) than long (M = 2.46) stories using the strict criterion, $F(1, 42) = 7.40$. The length effect was only marginally ($p < .10$) significant with the lenient measure however, $F(1, 42) = 3.08$. Use of the lenient scoring criteria seemed to benefit scores on the long (M = 2.11) but not the short (M = 1.85) stories. Since the likelihood of picking the two key parts of a story by chance would be greater for short than long stories, it appears that the lenient scoring scheme was indexing real monitoring by the children rather than lucky guesses and rote recall. Further, it seems that with the strict scoring scheme the length effect is primarily due to reporting difficulties rather than failure to monitor comprehension with the long stories, since the difference between short and long is small with lenient scoring.

Effects due to story plausibility were large and significant for both the strict (high M = 1.48; low M = 2.97), $F(1, 42) = 58.68$, and lenient scoring (high M = 1.07; low M = 2.90), $F(1, 42) = 99.77$. Virtually all of the children's problems with the high plausibility stories appear to be in stating the inference correctly, since with the lenient scoring performance was almost perfect. On the other hand, performance on the

less plausible Markman stories did not improve due to the lenient scoring and difficulties here are probably due to real failure to effectively monitor as concluded by Markman.

Overall, the length of a story seemed to have a rather small effect, primarily on ease of reporting the inconsistency rather than on ability to monitor comprehension. Story concreteness and plausibility, however, had a large effect on monitoring ability. In this study and in Markman's, 6th grade children were found to be poor in detecting inconsistencies with somewhat implausible stories. However, even third grade children were able to spontaneously detect story inconsistencies with the more plausible story content used in this study. The reported failures of elementary school children to monitor their own comprehension do not appear to reflect a general failure to spontaneously monitor. Instead, children's ability to monitor is at least partially determined by the plausibility of the message being comprehended.

Table 1

Inconsistency Detection Means (Strict Scoring)
as a Function of Story Length
and Plausibility

| Story | Grade 3 | Grade 6 |
|---|---|---|
| High Plausibility | | |
| Short | 1.00 | 1.32 |
| Long | 1.95 | 1.64 |
| Low Plausibility | | |
| Short | 3.26 | 2.44 |
| Long | 3.00 | 3.24 |

Table 2

Inconsistency Detection Means (Lenient Scoring)
as a Function of Story Length
and Plausibility

| Story | Grade 3 | Grade 6 |
|---|---|---|
| High Plausibility | | |
| Short | 1.00 | 1.08 |
| Long | 1.16 | 1.04 |
| Low Plausibility | | |
| Short | 3.16 | 2.28 |
| Long | 3.00 | 3.24 |